

$$A \circ \{1, 2, 3\} \quad B \circ \{2, 3\} \quad A \times B = \{(1, 2) (1, 3) (2, 2) (2, 3) (3, 2) (3, 3)\}$$

$$B^r = \{(2, 2) (2, 3) (3, 2) (3, 3)\} \quad A_{B-B^r} = \{(1, 2) (1, 3)\}$$

$$R_u = \{(2, m^2) (2, 1) (-2, m) (-2, m) (2, m+2) (m+2)\} \Rightarrow \boxed{m=2} \quad m^2 = m+2 \rightarrow m = -1 \text{ یا } 2$$

$$f(u) = \{(2, m^2) (2, 1) (m, 2) (2, m+2) (-2, m) (-1, 3)\}$$

$$m^2 = m+2 \quad \begin{matrix} 2 \times \\ -1 \end{matrix} \quad m = -1$$

$$\text{if } u=1 \Rightarrow 0 = a + b \rightarrow a = -b$$

$$f(u) = \begin{cases} u^2 - 1 & u \leq 1 \\ au + b & 1 \leq u \leq 2 \\ u^2 & u > 2 \end{cases}$$

$$\text{if } u=2 \Rightarrow 2a + b = 1$$

$$\begin{aligned} a + b &= 0 \rightarrow a = 1, b = -1 \\ 2a + b &= 1 \end{aligned}$$

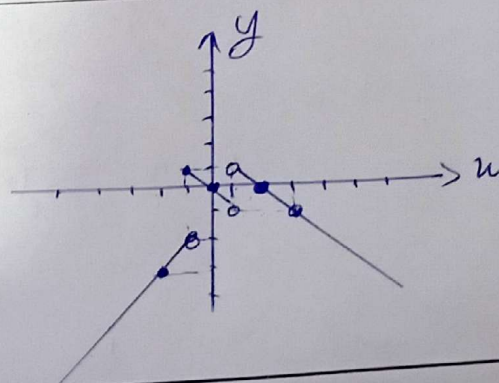
$$ab = -1$$

$$f(u) = \begin{cases} 2u - 3 & u > k \\ k - 3u & u \leq k \end{cases}$$

$$\text{if } u=k \Rightarrow 2k - 3 = 0 - 3k \Rightarrow 5k = 3$$

$$k = 3/5$$

$$f(u) = \begin{cases} -u + 2 & u > 1 \\ -u & -1 \leq u < 1 \\ u - 1 & u < -1 \end{cases}$$



$$\Rightarrow f: \mathbb{R} \rightarrow \mathbb{R}$$

$$R_f = [1, \infty)$$

$$\text{الف) } ry'' + u' + 1 = 0 \rightarrow ry_1'' + u_1' + 1 = 0 \Rightarrow ry_1'' + u_1' = ry_1'' + u_1'$$

$$r(y_1 - y_1)(y_1' + y_1' + y_1 y_1) + (r - u_1)(u_1 + u_1) = 0 \quad \text{جوابك هو 1/2 x 2/3}$$

$$\text{ب) } u' - ru + 1 = 0 \Rightarrow ry'' - ry = 0 \rightarrow (ry - r)' + (u - 1)' = 0$$

$$y = \sqrt{u}, u = 1 \quad \text{جوابك هو 1/2 x 2/3}$$

$$\text{الف) } r \sin y = y \sin u \quad \frac{y=1, u=\pi}{r} \rightarrow \frac{\pi}{r} \sin 1 \neq 1 \times \sin \frac{\pi}{r}$$

$$\text{ب) } \sqrt{\frac{u}{y}} + \sqrt{\frac{y}{u}} = r \rightarrow \frac{\sqrt{u}}{\sqrt{y}} + \frac{\sqrt{y}}{\sqrt{u}} = r \rightarrow \frac{u+y}{\sqrt{uy}} = r \rightarrow \frac{u+y - r\sqrt{uy}}{\sqrt{uy}} = 0$$

$$\text{الف) } \sqrt{\frac{u-1}{u-1}} + \sqrt{\frac{1-u}{u}} = 0 \quad \text{جوابك هو } (0, 1]$$

$$\text{ب) } \sqrt{u} + \sqrt{y-1} = \sqrt{r} \quad \begin{cases} u=0, y=r \\ y=1, u=r \end{cases} \quad \text{جوابك هو } [0, r]$$

$$\text{الف) } \frac{\sqrt{u^2 - u + 1}}{\sqrt{u^2 - 10u + 16}} = \frac{\sqrt{(u-1)(u-4)}}{\sqrt{(u-2)(u-8)}} \quad \text{جوابك هو } (-\infty, 1] \cup (4, +\infty)$$

$$\text{ب) } \sqrt{\frac{u^2 - u + 1}{u^2 - 10u + 16}} = \frac{\sqrt{(u-1)(u-4)}}{\sqrt{(u-2)(u-8)}} \quad \text{جوابك هو } (-\infty, 1] \cup (4, 8] \cup (16, +\infty)$$

$$\text{الف) } \frac{\sqrt{u^2 - 2u + 1}}{\sqrt{u^2 - 10u + 16}} = \frac{\sqrt{(u-1)^2}}{\sqrt{(u-2)(u-8)}} \quad \text{جوابك هو } (-\infty, 1] \cup (8, +\infty)$$

$$\text{ب) } \sqrt{\frac{u^2 - 2u + 1}{u^2 - 10u + 16}} = \frac{\sqrt{(u-1)^2}}{\sqrt{(u-2)(u-8)}} \quad \text{جوابك هو } (-\infty, 1] \cup (8, \frac{16}{9}) \cup (\frac{16}{9}, +\infty)$$